REMARKS

I. Introduction

Claims 1 – 30 are pending in this application. Claims 1 – 15 have been rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Specifically, the Examiner contends that claims 1 – 15 are directed to abstract ideas. Applicants note with appreciation the allowance of claims 16 – 30. Claims 1 and 8 have been amended to more particularly point out the subject matter of the invention. In view of the foregoing amendments and the following remarks, Applicants submit that all pending claims are in condition for allowance.

II. Information Disclosure Statement

The Examiner asserts that the Information Disclosure Statement (IDS) filed May 11, 2006 fails to comply with 37 C.F.R. § 1.98(a)(2). Applicants submit herewith a supplemental IDS and form 1449, and respectfully request that the Examiner acknowledge the receipt and consideration of the cited references in the next Office Action.

III. Claim Rejections Under 35 U.S.C. § 101

Applicants submit that claims 1 – 15 constitute patentable subject matter under 35 U.S.C. § 101. With regard to claim 1, the Examiner contends that the steps of "forming first catenated data," "forming second catenated data," and "performing a computation of a single instruction using the first catenated data and the second catenated data" do not transform an article or

physical object to a different state or thing, and is not considered to produce a useful, concrete, and tangible result. Applicants respectively disagree. A "process" is one of the statutorily defined categories of inventions that clearly constitute patentable subject matter. 35 U.S.C. § 101 states that any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may be patented. As a method claim, claim 1 falls squarely within the category of "process" inventions. Thus, as an initial matter, claim 1 must be recognized as being part of a category of patentable inventions under § 101.

Furthermore, claim 1 does not belong to any of the judicially created exceptions to patentable subject matter – i.e., abstract ideas, laws of nature, and natural phenomenon. Specifically, abstract ides related to mathematical expressions and other fundamental principles that are only expressed in the abstract, such as Einstein's famous equation $E = MC^2$. By contrast, claim 1 relates to a specific method for processing data in a programmable processor. The method comprises the steps of:

> (1) "copying a first memory operand portion from the first memory system to the second memory system, the first memory operand portion having the first data path width;"
>
> (2) "copying a second memory operand portion from the first memory system to the second memory system, the second memory operand portion having the first data path width and being catenated in the second memory system with the first memory operation portion, thereby forming first catenated data;"
>
> (3) "copying a third memory cell operand portion from the first memory system to the third memory system, the third memory operand portion having the first data path width;"
>
> (4) "copying a fourth memory operand portion from the first memory system to the third memory system, the fourth memory operand portion having the first data path width and being catenated in the third memory system with the third memory operand portion, thereby forming second catenated date; and"

(5) "performing a computation of a single instruction using the first catenated data and the second catenated data."

These steps require specific, physical acts to be performed by a programmable processor on the data elements obtained from memory systems. This is not just an abstract idea. Claim 1 is not directed merely to the general concepts of "forming first catenated data" and "forming second catenated data" as suggested by the Examiner. Rather, claim 1 is directed to the specific steps, as presented above, that are performed in an actual programmable processor on data obtained from memory systems.

Furthermore, the method of claim 1 has tremendous practical application. Even if an invention touches on an abstract idea, law of nature, or natural phenomenon, the invention may still be patentable if it possess a practical application. *See, Diamond v. Diehr*, 450 U.S. 175, 187, 209 USPQ 1, 8 (1981) ("[i]t is now commonplace that an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.")(emphasis in original). The specific steps recited in claim 1 are applied in a practical manner to arrange data elements and perform a computation in a programmable processor. Thus, even if it is assumed *arguendo* that these recited steps somehow touch on abstract ideas, which they do not, the practical application undoubtedly establishes that the invention of claim 1 would nevertheless possess patentable subject matter.

Indeed, the invention sets forth a powerful technique for arranging data and performing a computation in a programmable processor. Using this technique, software programmers can create new, more versatile computer programs that may not have been feasible before. Since computer programs literally operate everyday to support countless industries, an improvement that allows better computer programs to be written clearly provides a practical application that has useful, tangible, and concrete results. For all the reasons stated above, the invention recited

in claim 1 deserves patent protection. Claims 2 – 7 depend from claim 1 and therefore also posses patentable subject matter, for at least the same reasons stated above with respect to claim 1.

With regard to claim 8, the Examiner asserts that the steps of forming first catenated data, producing second catenated data, and moving catenated data portions from a first memory system to a second memory system is not considered transforming an article or physical object to a different state or thing, and is not considered to produce a useful, concrete, and tangible result. For at least similar reasons as stated above in reference to claim 1, Applicants submit that the invention of claim 8 is not an "abstract idea." The invention recited in claim 8 relates to a specific techniques for processing data within a programmable processor. Thus, the invention provides practical application that has useful, tangible, and concrete results. For at least these reasons, Applicants submit that claim 8 is directed to an invention having patentable subject matter. Claims 9 – 15 depend from claim 8 and therefore also possess patentable subject matter, for at least the same reasons as stated above with respect to claim 8.

IV. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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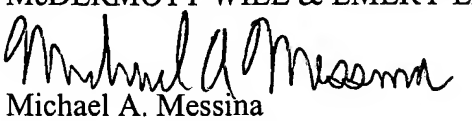

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